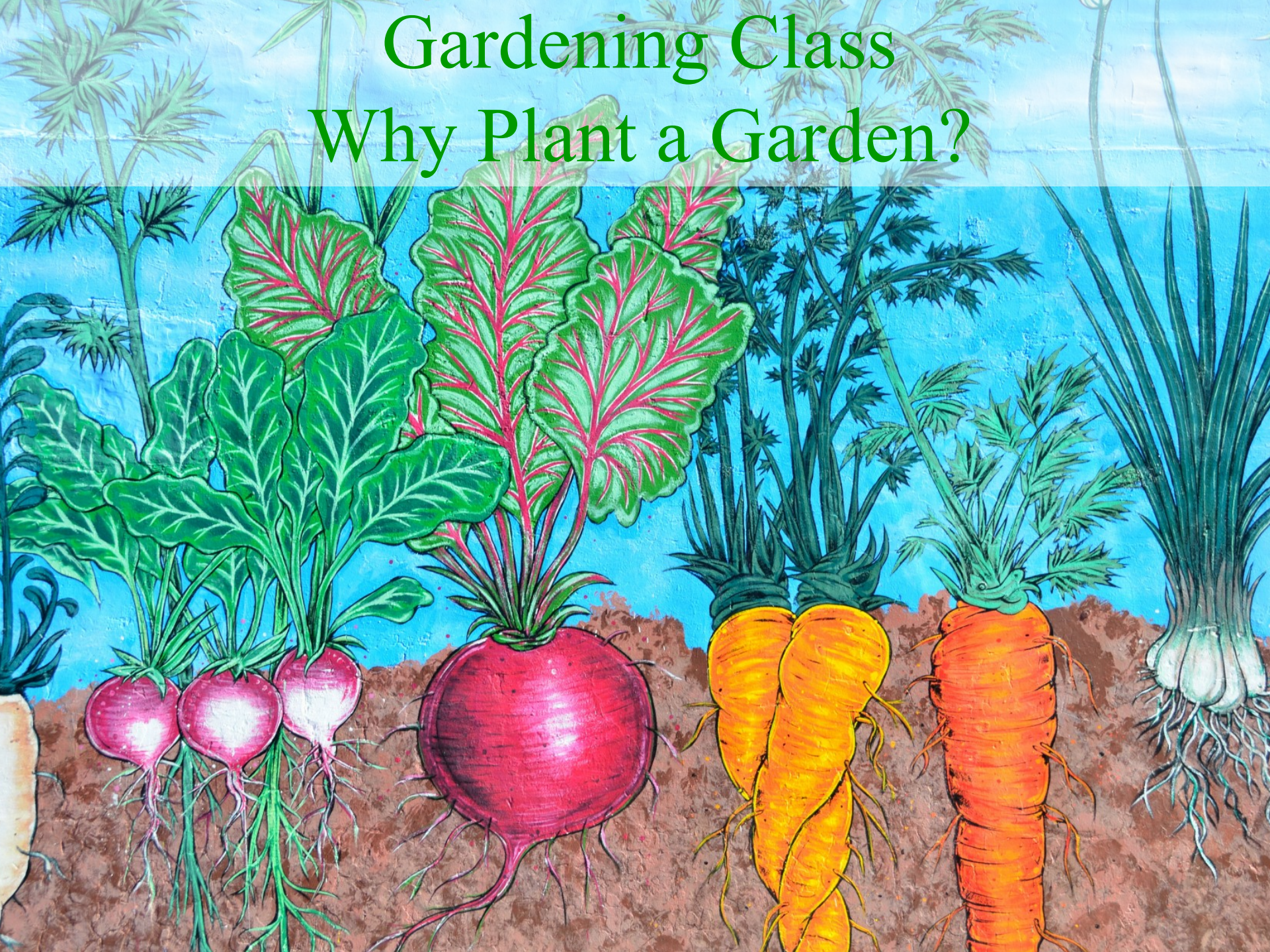


Gardening



Gardening Class

Why Plant a Garden?



Why Plant a Garden?

1. God planted the first garden.

“And the LORD God planted a garden eastward in Eden; and there he put the man whom he had formed.” - Genesis 2:8 KJV

“And the LORD God took the man, and put him into the garden of Eden to dress it and to keep it.” - Genesis 2:15 KJV

Why Plant a Garden?

2. Relieve stress



- Thirty gardeners were given a stressful task. Then randomly assigned to thirty minutes of indoor reading or outdoor gardening. Gardening resulted in . . .
- Greater decreases in salivary cortisol levels during recovery period.
- Full restoration of positive mood (compared to further deterioration in reading group).

Why Plant a Garden?

3. Lower risk of dementia

In a study of 2805 men and women (age 60 or over) who were followed for 16 years . . . daily gardening provided a 36% lower risk for dementia.



Why Plant a Garden?

4. Just viewing nature may help healing after surgery.

“Records on recovery . . . of patients . . . were examined to determine whether assignment to a room with a window view of a natural setting might have restorative influences. Twenty-three surgical patients assigned to rooms with windows looking out on a **natural scene** had **shorter postoperative hospital stays**, received **fewer negative evaluative comments** in nurses' notes, and **took fewer potent analgesics[pain killers]** than 23 matched patients in similar rooms with windows facing a **brick building wall.**” (emphasis added)

Why Plant a Garden?

5. Viewing nature may improve relaxation

In a study of 50 older Chinese women (ages 58-90), “the participants observed a healthy money plant in a planter for 5 min; the lack of presence of a plant was used as a control.”

“After a 5-min observation of a money plant as compared with the control condition, systolic blood pressure significantly decreased . . . and psychological measurements revealed lower anxiety scores.”

Why Plant a Garden?

6. May improve productivity and lower stress

In a windowless college computer lab, participants were more productive and had lower systolic blood pressures when plants were present.



Virginia I. Lohr, Caroline H. Pearson-Mims, and Georgia K. Goodwin (1996) Interior Plants May Improve Worker Productivity and Reduce Stress in a Windowless Environment. *Journal of Environmental Horticulture*: June 1996, Vol. 14, No. 2, pp. 97-100.

Why Plant a Garden?

6. Nature improves mental health

“Every green environment improved both self-esteem and mood; the presence of water generated greater effects.”₁

“Just five minutes of exercise in a park, working in a backyard garden, on a nature trail, or other green space will benefit mental health.”₂

1. Barton J, Pretty J. What is the best dose of nature and green exercise for improving mental health? A multi-study analysis. *Environ Sci Technol*. 2010 May 15;44(10):3947-55. doi: 10.1021/es903183r. PubMed PMID: 20337470.

2. American Chemical Society. "In the green of health: Just 5 minutes of 'green exercise' optimal for good mental health." *ScienceDaily*. ScienceDaily, 21 May 2010. <www.sciencedaily.com/releases/2010/05/100502080414.htm>.

Why Plant a Garden?

7. Get sunshine and Vitamin D

In a systematic review, “compared to outdoor workers, indoor workers had lower 25-hydroxyvitamin D.”

Why Plant a Garden?

7. Sun exposure protects against high blood pressure and cardiovascular disease

In a systematic review, “a small body of evidence that suggests sun exposure protects against high” blood pressure and cardiovascular disease.

Why Plant a Garden?

8. Gardening may increase fruit and vegetable intake.

In a “cross-sectional evaluation of 1,121 college freshmen with suboptimal F/V [fruit and vegetable] consumption from eight US universities” this “analysis suggests that the combination of childhood and recent gardening experience is associated with greater current F/V intake . . .”



Loso J, Staub D, Colby SE, Olfert MD, Kattelman K, Vilaro M, Colee J, Zhou W, Franzen-Castle L, Mathews AE. Gardening Experience Is Associated with Increased Fruit and Vegetable Intake among First-Year College Students: A Cross-Sectional Examination. J Acad Nutr Diet. 2018 Feb;118(2):275-283. doi: 10.1016/j.jand.2017.09.005. Epub 2017 Dec 1. PubMed PMID: 29198845; PubMed Central PMCID: PMC5929138.

Why Plant a Garden?

9. Breath better air

In a “9-wk intensive monitoring campaign of indoor and outdoor air pollution . . . carried out in 2011 in a primary school of Aveiro, Portugal” suggests that “plants might improve indoor air and make interior breathing spaces healthier.”



Why Plant a Garden?

10. Exercise

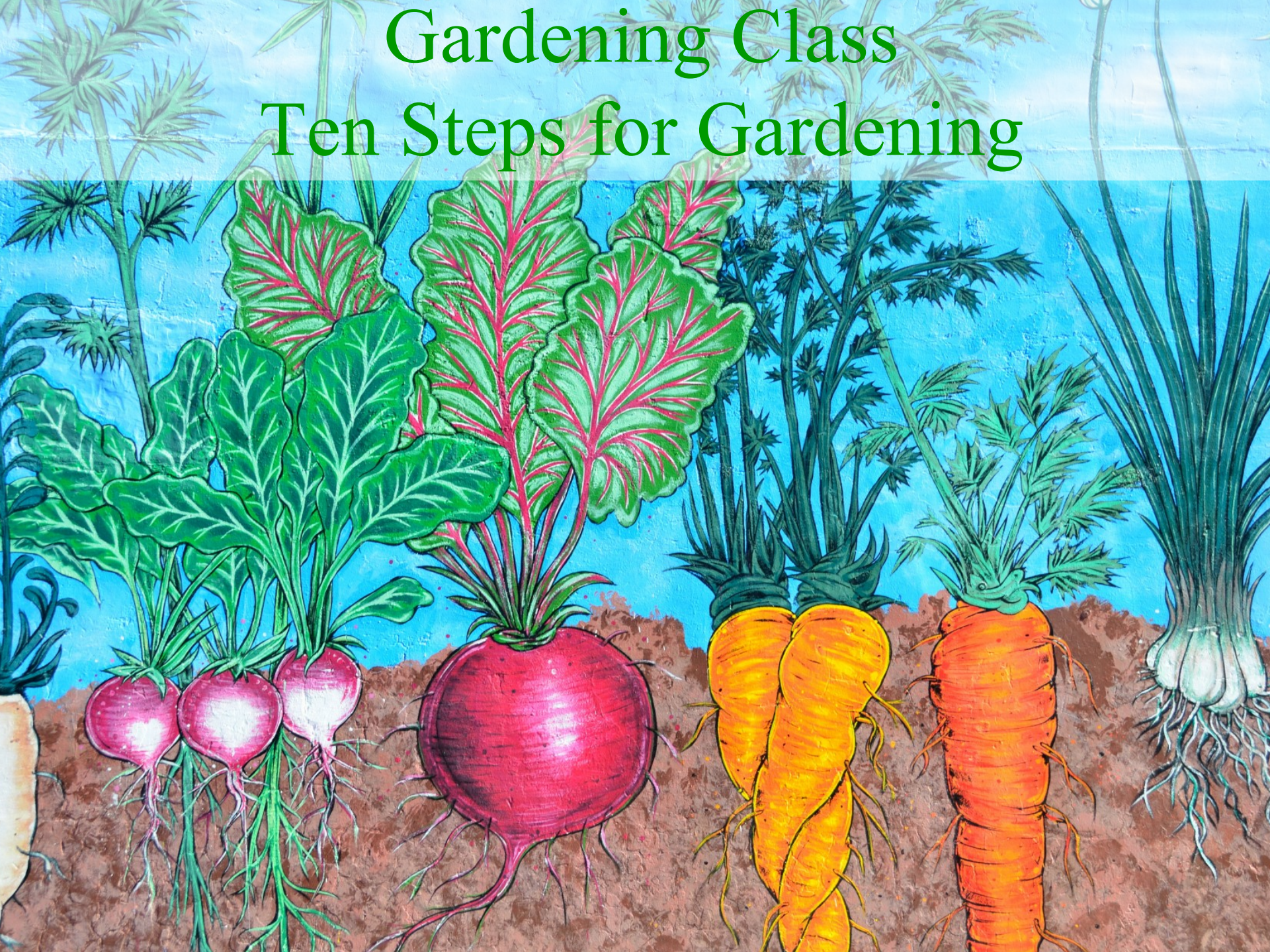
In a “national cohort study of 88,140 US adults” they found that “low levels (10–59 min/week) of either light-to-moderate” physical activity “were associated with reduced risk of all-cause mortality.”

Light-to-moderate physical activity included things like gardening, brisk walking, etc.



Gardening Class

Ten Steps for Gardening



Ten Steps for Gardening

1. Choose the right location

- Soil – good, fertile, level, well drained.
- Sunlight – a necessity.
- Avoid nearby trees or shrubs – they compete for water, light, and nutrients.
- Water – best to have a supply nearby.
- Near home – close for gardening and harvest.



Ten Steps for Gardening

2. Plan your garden

- Select crops – ones you and your family like, that are suitable to your area, and fit the size of your garden
- Map garden – when and where to plant, spacing between rows and plants, fertilizer
- Equipment needed – for tilling, cultivating, planting, and irrigating
- Keep a record – like vegetable variety, plant date, source of seeds, fertilizer

Ten Steps for Gardening

3. Seed selection

- Variety – use one that is well adapted to your area
- Days to maturity – varies among varieties
- Determinate vs. indeterminate – determinate have one crop whereas indeterminate continue to produce
- Yield – some varieties yield more than others

Ten Steps for Gardening

3. Seed selection



- Quality – texture, flavor, keeping ability, etc. varies among varieties
- Disease resistance – some varieties have more disease resistance
- Source of Seeds – buy seeds and transplants from a reliable source (examples: High Mowing Organic Seeds, Baker Creek Heirloom Seed Company)

Ten Steps for Gardening

4. Soil preparation

- Soil test – shows amount and availability of nutrients in soil for fertilizing
- Organic matter – Add compost, stable manure, or green-manure (cover crop)
- Fertilizers – add based on soil test or use a general fertilizer
- Incorporate organic matter and fertilizers into the soil

Ten Steps for Gardening

5. Growing vegetable vertically

- Common plant supports: trellis, cage, stake, etc.
- Plants you can grown vertically: beans, peas, tomatoes, cucumbers, small squash, etc.
- Training vines – weave the vines gently between mesh openings every few days
- Staking Tomatoes – prune and tie the tomato plant to a stake, which is pounded into the ground

Ten Steps for Gardening

6. Planting



- Planting time – plant at the recommended times to help avoid frost or hot weather₁
- Planting depth – general rule: plant seeds at a depth of three to four times their thickness₂
- Planting spacing – proper spacing to allow for light, water, soil nutrients, and proper sizing₁

1. Langelloto-Rhodaback, Gail A. “Growing Your Own.” Growing Your Own | OSU Extension Catalog | Oregon State University, Oregon State University, Apr. 2011, catalog.extension.oregonstate.edu/em9027/html.
2. Jauron, Richard. Planting a Home Vegetable Garden. Planting a Home Vegetable Garden, Iowa State University Extension and Outreach, 2013.

Ten Steps for Gardening

7. Watering



- Methods (three common)
 - Hand or hose – can be time consuming, be sure to water deeply
 - Drip irrigation or soaker hoses – convenient, conserve water but require initial time and money investment
 - Portable sprinklers – may be wasteful of water and wet plant foliage, which may promote disease

Ten Steps for Gardening

7. Watering



- How much water?
 - Goal: “to deliver water to the roots of the plants at about the same rate that it is removed from soil by plants and evaporation”
 - Germinating Seeds – must be kept moist
 - Developing Plants – water deeply (6 inches), but less often (wait for top inch or two to dry out)

Ten Steps for Gardening

8. Weed control



- Weeds – compete for water and nutrients and sunlight and may “harbor insects and diseases”
- It is best to get rid of weeds “just as they appear on the soil surface” by cultivating (with a hoe for example).
- Mulching – using a protective material to cover the soil around your plants, like leaves, grass clippings, peat moss, straw, paper, or black plastic.

Ten Steps for Gardening

9. Pest control without chemicals

- Crop rotation
- Vigorous and resistant plant varieties
- Planting early
- Using physical barriers
- Handpicking insects
- Soil solarization
- Remove weeds and ripe vegetables in or around garden

Ten Steps for Gardening

10. The harvest

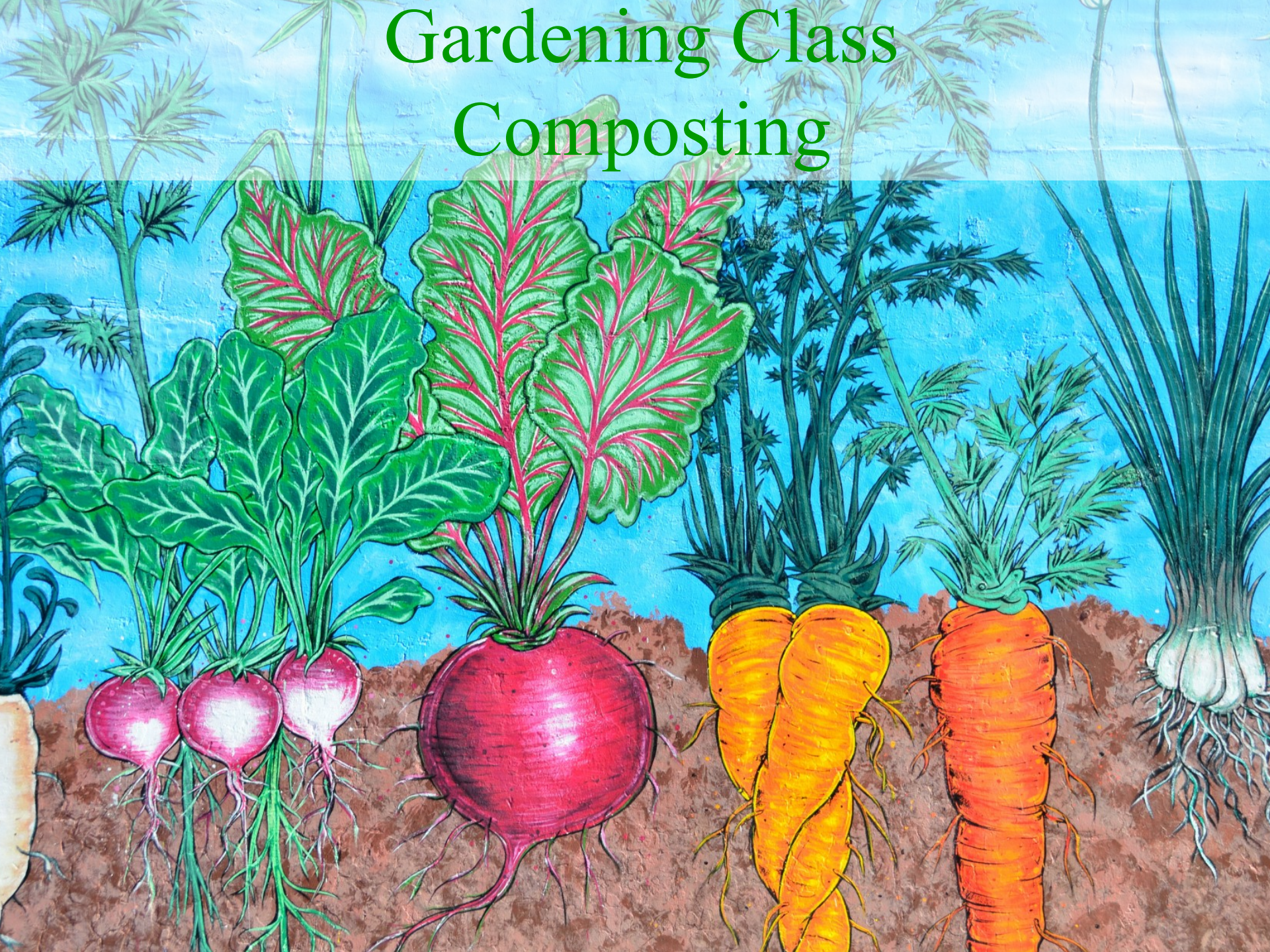
- Check frequently for ripe vegetables
- Harvest crop at
 - Proper maturity
 - Peak flavor and nutrition
- Avoid
 - Bruising or damaging vegetables
 - Stepping on vine or breaking stems
 - Harvesting when wet



“Harvesting Vegetables.” A Taste of Gardening, University of Illinois Extension,
web.extension.illinois.edu/tog/harvest.cfm.

Gardening Class

Composting



Compost Informational Video

Insert video on composting here!